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Method and Device for Generating a High-Resolution Large Image

Field of the Invention

The invention relates to a device for generating a high-resolution large image on a surface, in particular on a building façade, whereby a large number of light passage openings are each illuminated by a video projector.

Description of the Invention

This invention is based on the task of proposing a method and device for generating a high-resolution large image on a building façade, which allow for a better use of such façades for advertising and other purposes. The invention aims at making it possible to project high-resolution large images in an improved quality onto any side of a building, in particular onto the building façade.

This task is solved substantially by illuminating each light passage opening preferably with one projector that produces a section of the image (partial image).

By proceeding in such manner, it is possible to generate a wide variety of aesthetic, high-resolution large images.

According to a further development of the invention, it is proposed that the light passage openings shall be the windows of the façade. Moreover, the light passage openings are conveniently illuminated from the rear side located across from the front side of the surface, i.e. from the inside of the room onto the window to be illuminated toward the outside, to which end the projectors are arranged preferably in the area of the rear side located across from the front side of the façade, or in the area of the ceiling.

Since the realization of an image of good quality requires a good distribution of light across the entire surface of each illuminated window, it is also proposed, preferably, that the windows are illuminated in such a way that the window, across its substantial surface, generates a partial image on the front side of the façade. This is made possible, in particular, by applying a coating, adhesive film or blind to the window, which is illuminated by the light source.

The device according to the invention features a large number of light passage openings and a large number of projectors for the illumination of the light

passage openings, which produce a high-resolution overall image on the front side of the façade.

Furthermore, control devices may be provided, with which the partial images are assigned to the individual projectors, thus allowing for the creation of a high-resolution overall image. An example of an embodiment of the invention is shown in the drawings.

Commercial Usability

It is possible to illuminate buildings, in particular buildings with façades consisting largely of glass surfaces, e.g. industrial or commercial enterprises, in a special way at night, such that a high-resolution large image is produced. To this end, the individual light passage openings (e.g. windows) of the façade are used as image sections (partial images) so that high-resolution large images, for instance promotional films or stock exchange quotations, are displayed across the entire façade.

Brief Description of the Drawings

The drawings show:

Fig. 1 a schematic view of the façade of a high-rise building;

Fig. 2 a cross-section through a room in the area of the building façade; and

Fig. 3 section “Z” from Fig. 1.

Ways to Perform the Invention

Fig. 1 shows a schematic representation of a façade 1 of a building 2. Façade 1 shows a large number of light passage openings (windows) 3. Each window 3 can be illuminated by a projector 5, represented in greater detail in Fig. 2. In the example shown, a number of windows 3 are illuminated in such a way that a high-resolution image of a fish is produced.

Fig. 2 shows in greater detail how the device is set up for illuminating a window. The figure is a cross section through the building 2 showing the detail of a story or building section 4. The window 3 shall be illuminated from the side located opposite of the façade 1 by a projector 5 generating a partial image.

In order to illuminate the entire surface of the window 3, it is proposed that a film or rear projection screen 6 is applied to the window glass. The material is translucent, but ensures that the light from the projector 5 is captured and

distributed across the entire surface of the window. Preferably, a plastic film or a rear projection screen should be used to this end.